

## **REMARKS**

This amendment is presented in the revised format permitted in the notice entitled "Amendment in a Revised Format Now Permitted," which was published on the USPTO's website on January 31, 2003.

Claims 49, 50, 53, 61, 62 and 65 remain in the application.

Previously added claims 60 and 72 have been rewritten in independent form as claims 49 and 61, respectively, and are specifically directed to the embodiments of applicants' invention illustrated in Figs. 3, 4 and 8.

Reconsideration of the rejections of claims 60 and 72, as well as claims 50, 53, 62 and 65, under 35 USC 102 as anticipated by Hatschek (US 3,281,613), Angeloff (US 3,521,090) or Maruyama et al (US 6,114,798) is respectfully requested. Claims 49 and 61 (formerly claims 60 and 72, respectively) each recite that "the first and/or second electrode connection (12, 13) constitutes a contact surface in the form of a section of a cylinder circumference extending in the circumferential direction at least a substantial extent, and also extending in the longitudinal direction of the actuator body (1)."

During patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Prater, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969).

The "at least substantial extent" language of claims 49 and 61 is a term of degree for which explicit guidelines are set forth in applicants' specification to enable one skilled in the art to distinguish the claimed structure from structures in which the first and second electrode connections do not extend in the circumferential direction at

least a substantial extent. To this end, the specification at page 7 describes the contact surfaces of the first and second electrode connections 12, 13 as extending to almost 180° around and constituting a shell on the circumferential surface of the circular, cylindrical piezoelectric actuator body 1.

To support a rejection of a claim under 35 U.S.C. § 102, it must be shown that each element of the claim is found, either expressly described or under principles of inherency, in a single prior art reference. See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

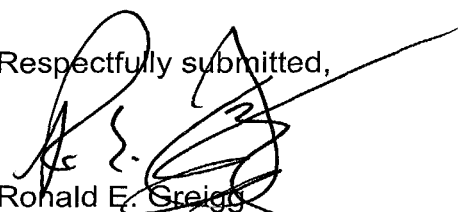
Hatschek does not anticipate claim 49 or 61 because, as clearly shown in Figs. 2 and 3, Hatschek's first and second electrode layers 6 do not extend to the outer wall of the actuator body and, thus, lack portions which are disposed on the outer cylinder wall of the actuator body as required by the claims. Further, the electrode connections or connection bridges 7 do not form of a section of a cylinder circumference extending in the circumferential direction at least a substantial extent as required by the claims.

Angeloff teaches a piezoelectric transducer with electrically conductive mounting rods 26 serving as contact surfaces for electrode layers 12 and 14. Maruyama et al teaches two side electrodes 9, 10 formed on stacked side portions of a stack of piezoelectric ceramics 1 and serving as contact surfaces for electrode layers 2', 7' (in Figs. 1A and 1B) and 2, 3 (in Fig. 10). Neither reference teaches electrode connections formed of a section of a cylinder circumference extending in the circumferential direction at least a substantial extent as required by the claims.

Since none of the applied references teaches each and every element of the claims, the claims are not anticipated by Hatschek, Angeloff or Maruyama et al.

In accordance with the foregoing, applicants respectfully request that the examiner reconsider and withdraw the outstanding rejections. If, however, the examiner feels that any further issues remain or require clarification, the examiner is cordially invited to contact the undersigned in order that any such issues may be promptly resolved.

Respectfully submitted,



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